INSTALLATION INSTRUCTIONS
For Engineered Wood Flooring

INSTALLER/OWNER RESPONSIBILITIES

Engineered wood flooring is a product of nature and its inherent beauty stems from the fact that each piece is unique with no two pieces the same. Due to the fact that this flooring is a product of nature, the installer and/or owner, have the following responsibilities:

Understanding how the floor will look once installed – the installer and owner must meet prior to installation to review: How was the floor chosen? Review the control samples, (the samples from which the floor was chosen), and compare to the actual flooring batch onsite prior to installation to make sure it meets the owner's expectations as to:

- **Color/Graining** - do certain dark/light pieces or wild grained need to be graded out to meet the owners expectations?
- **Color Variation, Batch to Batch** – inspect the production run of flooring you received and make sure it meets your expectations. Wood from different locales can have varying colors and grains and differ from the samples from which the floor was chosen. Tint colors may also vary slightly batch to batch. Make sure the owner will be happy with the batch they received.
- **Color Change** - do they understand how the wood will change color overtime? The owner may have chosen their floor from samples that have aged so they need to understand in advance of installation the color change to be expected.
- **Finish issues:** Is the gloss correct? Does the look of the finish meet the owner's expectations? Does the owner understand that the finish will scratch and wear and that care must be taken during installation, move-in and in-use?

Congratulations! You have now made sure that the owner will not be disappointed once the flooring is installed and they see it for the first time. Installer responsibilities during installation:

- Receive the floor & make sure it is as ordered and meets the owner's expectations.
- Test the subfloor and relative humidity on site to make sure the flooring will perform satisfactorily on this installation.
- Grade out any pieces with visible defects and stop the installation should a reoccurring problem be found (5% allowed by industry practices). DO NOT INSTALL pieces with visible defects.
- Keep a Permanent Job Record
- Make sure the owner understands that wood and water, (as well as wood and overly dry conditions), do not mix as engineered wood flooring is a natural material and will shrink/cup/move when over-dried and will expand, warp, and buckle/cup when over-wetted.
- Make sure the owner understands how to maintain the floor.

WARNING: Our flooring is well manufactured and is designed to perform within the typical residential environment. We are not responsible for site conditions, as we do not control them. Only you, the installer can test and correct for too dry or too wet site conditions prior to installation. Note: Engineered flooring installed in areas where the relative humidity is below 35% may cup, shrink in width/length, or crack and in these dry conditions a humidifier is necessary to bring relative humidity above 35%. Flooring installed on top of wet sub floors may crown, (and then cup), swell, (and then shrink), buckle, telegraph, or edge/tip raise. Flooring that is soaked from above will do the same. DO NOT INSTALL THIS FLOORING ON WET SUBFLOORS OR IN OVERLY DRY CONDITIONS without first correcting any deficient conditions.

PRE-INSTALLATION JOBSITE REQUIREMENTS

Carefully examine the flooring prior to installation for color, finish and quality. Ensure adequate lighting for proper inspection. If flooring is not acceptable, contact your distributor immediately and arrange for replacement. Flooring installed with visible defects will not be accepted for return or refund. Prior to installation of any flooring, the installer must ensure that the jobsite and subfloor meet the requirements of these instructions. Flooring failure resulting from unsatisfactory jobsite and/or subfloor conditions is not a product failure.

Wood flooring should be one of the last items installed for any new construction or remodel project. All work involving water or moisture should be completed before flooring installation. Warning – water and wood do not mix. Installing flooring onto a wet subfloor will likely cause cupping, tip & edge raising, subsequent gapping.

Room temperature and humidity of installation area should be consistent with normal, year-round living conditions for at least a week before installation of wood flooring. Room temperature of 65-80°F and a humidity range of 35-55% is recommended. Warning - humidity levels below 35% will likely cause movement in the flooring, including gapping between pieces and possible cupping and checking in the face. Solid wood floors, both unfinished and pre-finished, MUST be equalized properly before installation. Please follow the recommendations later in this document for proper equalization instructions.

PRE-INSTALLATION JOBSITE REQUIREMENTS

All Subfloors must be:

- Structurally sound
- Clean: Thoroughly swept and free of all debris (If being glued down, subfloor must be free from wax, grease, paint, sealers, & old adhesives etc., which can be removed by sanding)
- Level: Flat to 3/16" per 10-foot radius
- Dry and will remain dry: Subfloor must remain dry year-round. Moisture content of wood sub floors must not exceed 11%, concrete must not exceed 3.5 as measured with a Tramex Commercial Concrete Moisture Meter.

Subsequent rows: Lay by using floor nailer/stapler to blind-nail top inside edge of tongue at a 45 degree angle. Nail each board every 6-8" and within 2" of each end. Remember to stagger end joints from row to row and use a tapping block to fit boards together. It maybe necessary to face-nail in doorways or tight areas where the nailer/stapler can't fit, (or glue down in these areas and weight them while the mastic sets). The last two rows will need to be face-nailed, (or glued down), in the same manner as the first two rows.

WARNING – Stapling/nailing can cause dimpling on the face if stapled incorrectly. Always make sure to visually check the installed floor as you go to ensure that the stapling/nailing is not causing dimpling on the face. (Note: be sure to look at the face of the installed flooring at a low angle from a distance to see if dimpling is occurring as it is hard to see when directly above the floor.) If dimpling does occur, STOP and adjust the stapler/nailer shoe and angle/place of staple entry in order to avoid it. We is not responsible for dimpling.

FLOATING FLOOR INSTALLATION

Make sure subfloor is tested for moisture content first and is properly prepared. Laying an underlayment of 6-mil polyfilm with seams overlapped 8" is recommended for on or below grade. Fasten seams every 18-24" with duct tape. Run the outised edges of film up perimeter of each wall 4" which will trimmed after the installation is complete. Laying Foam underlayment with edges butted (not overlapped) and taped full length of the seam is recommended for soundproofing.

Start first row with groove toward wall. Glue end joints of the first row by applying a small continuous bead of Titebond to bottom side of the side groove. Clean up any adhesive that is on the face by using a damp rag immediately. Always leave at least a 3/8" expansion space between flooring and all walls and vertical objects such as pipes and cabinets.

Use wood or plastic spacers during installation to maintain this expansion space. Lay subsequent rows of flooring by applying glue to side and end joints and fitting planks together with tapping block. Remember to stagger end joints from row to row at least 8" apart.

Clean up any adhesive that is on the face of the floor by using a damp rag – DO NOT allow adhesive to dry on the flooring face as it is difficult to then remove without damages the flooring.

AFTER INSTALLATION

If you decide to cover the floor , (to allow the other construction trades to continue working), in order to protect the floors prior to final cleanup and turnover to the owner, use rosin paper to cover the floors and only use 3M Blue Tape to hold the rosin paper to the floor. Do NOT USE plastic film or other non breathing type coverings as this can cause the floor to become damaged from humidity buildups. Also, only use the 3M Blue Tape as this tape is designed for use on finishes and other tapes may pull and damage the finish when removing it.

Remove expansion spacers and reinstall base and/or quarter round moldings to cover the expansion space.

It is suggested that you buff the floor with lambs wool pads in order to "pull any splinters", remove any residues and handprints/footprints, etc.

Install any transition pieces that maybe needed (reducer, T-moldings, nosing, etc.).

Do not allow foot traffic or heavy furniture on floor for 24 hours (if glue-down or floating).

Dust mop or vacuum your floor to remove any dirt or debris.

Get a copy of this products warranty from you local retailer.

INSTALLATION INSTRUCTIONS
For Engineered Wood Flooring

STARTING YOUR INSTALLATION

Make sure subfloor is tested for moisture first and is properly prepared. Since wood expands with any increase in moisture content, always leave at least a ~1/2" expansion space between flooring and all walls and any other permanent vertical objects, (such as pipes and cabinets). This space will be covered up once you reapply base moldings around the room. Use wood or plastic spacers during installation to maintain this 1/2" expansion space. When laying flooring, stagger end joints from row to row by at least 8". When cutting the last plank in a row to fit, you can use the cut- off end to begin the next row. If cut-off end is 8" in length or less, discard it and instead cut a new plank at a random length and use it to start the next row. Always begin each row from the same side of the room. Work from several opened boxes of flooring and "dry lay" the floor before permanently laying the floor. This will allow you to select the varying grains & colors and to arrange them in a harmonious pattern. It also allows you the opportunity to select out very dark/light pieces for use in hidden areas in order to create a more uniform floor. Remember, it is the installers' responsibility to set the expectations of what the finished floor will look like with the end user first and then to cull out pieces that do not meet those expectations. To draw planks together always use a tapping block (or a short discarded piece of flooring) to hammer, as tapping the flooring itself will result in edge damage. When near a wall, you can use a pry bar to pry close the side and end joints. Take care not to damage edge of flooring. For glue down, use 3M Blue Tape to hold any pieces, which might have side bow and the need to hold them straight & tight until the adhesive sets up. Begin installation next to an outside wall. This is usually the straightest and best reference for establishing a straight working line. Establish this line by measuring an equal distance from the wall at both ends and snapping a chalk line. The distance you measure from the wall should be the width of a plank plus about 1/2" for expansion space. You may need to scribe cut the first row of planks to match the wall in order to make a straight working line if the wall is out of straight. Screwing down the first row through the face of the floorboard may be the easiest way to make the first row straight. After which the boards should be unscrewed and pulled up replacing that first row with new boards by glue down.

GLUE-DOWN INSTALLATION

Make sure subfloor is tested for moisture content first and is properly prepared. On concrete subfloors, which are on or below grade (ground level), always assume the worst and even if they measure dry, we now recommend taking the following installation steps to ensure a trouble-free installation. The cost of the precaution is little when compared to costs to rip out and replace a floor which has failed due to high moisture from the subfloor.

Method #1: We recommend installing a sheet vinyl floor first and then gluing down our wood floor over the sheet vinyl. Follow the vinyl manufacturers ' recommendations.

Method #2: Franklin, Bostik, and Stauf now offer Moisture Barrier Systems on which they provide a warranty that moisture will not pass through and damage your wood flooring. For Information contact one of these adhesive manufacturers

Note: DO NOT USE water based mastics - use only the above listed flooring adhesives. DO NOT use water based adhesives ! Follow adhesive instructions for proper trowel size and adhesive set time before beginning installation of flooring.

Once the spread adhesive has set up sufficiently per the adhesive manufacturer's instructions, lay the first row of flooring with groove facing the wall, and continue laying flooring. Always check your working lines to be sure the floor is still aligned. Use tapping block to fit planks together, but be careful not to let installed floor move on the wet adhesive while you are working. When first section is finished, continue to spread adhesive and lay flooring section by section until installation is complete. Use a damp cloth to immediately remove any adhesive that gets on flooring surface. Warning – DO NOT allow adhesives to dry on the finished flooring as it is very difficult to remove it once dried without damaging the flooring. For info on an adhesive remover please contact the adhesive company.

Remember to stagger end joints from row to row with at least 6" spacing. Avoid stair or "H" patterns in end joint placement. Always leave at least a 5/8" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets). Use wood or plastic spacers during installation to maintain this expansion space. Walk each section of flooring in order to make sure it is well bonded to the subfloor within the adhesive working time. Flooring planks on the perimeter of the room may require weight on them until adhesive cures enough to hold them down.

STAPLE/NAIL DOWN INSTALLATION

Make sure subfloor is tested for moisture content first and is properly prepared. Use air stapler/nailer with the appropriate naildown adapter (or a stapler/nailer of your choice) to make sure that stapling/nailing will not cause dimpling in the finished floor. Use the correct gauge nail/cleat/staple. For the first and second starting rows: Lay first plank inside chalk line with grooved edge toward wall. Install entire first row in the same manner. Always leave at least a 1/2" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets). Use wood or plastic spacers during installation to maintain this expansion space. In order to affix these first rows, as it is difficult to get the nail gun in place next to the wall, you may wish to set these rows first with screws and later replacing the boards and glue them down rather than simply face nailing them and leave unsightly nail holes which must be putty filled to match the wood floor. After gluing down these starting rows with a urethane adhesive set weight on top of these rows and allow them to set before commencing stapling/nailing the additional rows, as nailing the adjacent rows may cause the starting rows to subsequently move. Make sure the starting rows are straight and drawn tight.

Wood Sub floors must be dry and well secured. Nail or screw every 6" along joists to avoid squeaking. If not level, sand down high spots and fill low spots with an underlayment patch.
Concrete Sub Floors must be fully cured, at least 60 days old. Subfloor should be flat and level within 3/16" on 10'. If necessary grind high spots down and level low spots with Leveling Compound
Do not install on concrete unless YOU ARE SURE it stays dry year-round. All concrete should be tested for moisture and be below 3.5 moisture content as measured by a Tramex Commercial Concrete Moisture Meter. Other concrete testing methods maybe used, see Other Concrete Testing Methods.
It is highly recommended, that if gluing down on concrete, (even if you believe it is dry), which is on or below grade, to glue down Sheet Vinyl first to the concrete and then glue the wood flooring on top of the vinyl, as this provides an effective permanent moisture barrier. Another alternative to sheet vinyl is to use the Bostik or Franklin Moisture Barrier Systems and they provide warranties to you.
Remember, a concrete slab on /below grade that measures dry today may become moist in the future due to rising groundwater. Installing a moisture barrier now may be viewed as an insurance policy against concrete becoming wet in the future. This will lead to subsequent floor failure. Failure due to moisture related issues is not product failure and most likely voids all warranties.
Ceramic tile, resilient tile and sheet vinyl covered Subfloors must be well-bonded to subfloor, in good condition, clean and level. *Do not sand existing vinyl floors, as they may contain asbestos.*
OSB PS2 rated underlayment (Please note some OSB type products will not hold the nail in place which can result in squeaky floors. This is not a flooring defect.)
Radiant heat: Subfloor should never exceed 80°F. Check with radiant heat manufacturer's suggested guidelines to limit the maximum water temperature inside heating pipes.
Switch off heating unit one or two days before flooring installation and bring heat up slowly after installation. Note: All Engineered flooring is NOT WARRANTED for use over radiant heat.

INSTALLATION TOOLS

Some standard tools you made need include: Tape measure, tapping block, pencil, pry bar, chalk line, wood or plastic spacers, cross cutting power saw, hammer, blue painters tape, screwdriver, screws

For the glue-down installation method, you'll also need:

- Flooring adhesive: Bostik® Best , Franklin® 811 Urethane Adhesive/Mastic, or Stauf SMP-960 One-Step (Note: **DO NOT USE** water based mastics as they will cause this floor to fail)
- On concrete slabs, which are on/below grade, we strongly recommend installing Sheet Vinyl first and then installing the wood floor on the vinyl or using the Bostik, Franklin, or Stauf Moisture Barrier Systems.
- Trowel per flooring adhesive manufacturer's recommendations.

For nail-down installation, you will also need:

- Air stapler/nailer with the appropriate naildown adapter (recommended nailgun manufacturers are Powernail USA, Bostich)
- Nail/Cleat/Staple gauge should not exceed 18 in thickness. Also be certain that the nail enters the correct location on the tongue groove location. Defects caused from nailing are not considered product failure.
- Air compressor

For floating installation, you will also need:

- T&G Flooring Adhesive: Titebond is a recommended manufacturer.
- 3M Blue tape

Acceptable Subfloor types:

- Plywood (at least 3/4" thick)
- Underlayment grade particleboard (floating/glue-down only)
- OSB PS2 rated (at least 3/4" thick), Note: some OSB type products will do not hold the staple/cleat in place which can result in squeaky floors. This is a subfloor failure
- Concrete slab (floating/glue-down only)
- Existing wood floor
- Ceramic tile (floating/glue-down only)
- Resilient tile & sheet vinyl (floating/glue-down only)